



# European policy developments concerning incandescent lighting

**Paul Waide**

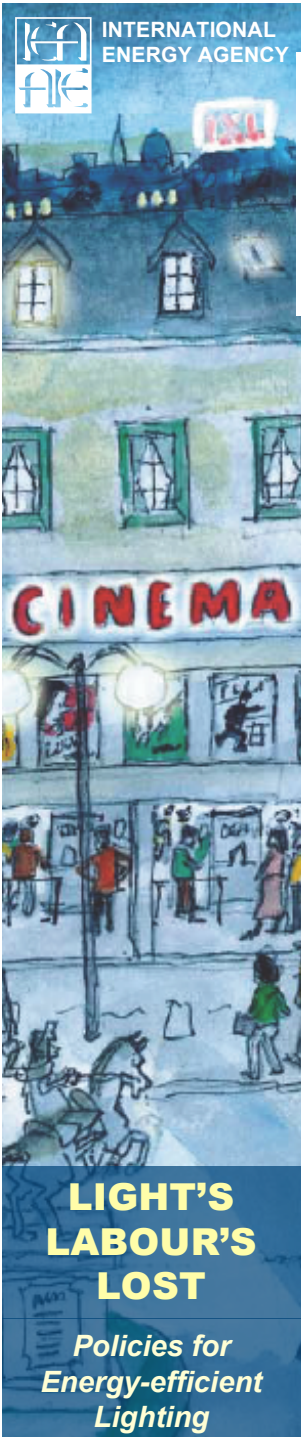
**Energy Efficiency and Environment Division  
International Energy Agency**

**California Energy Commission,  
Sacramento, 19th June 2007**

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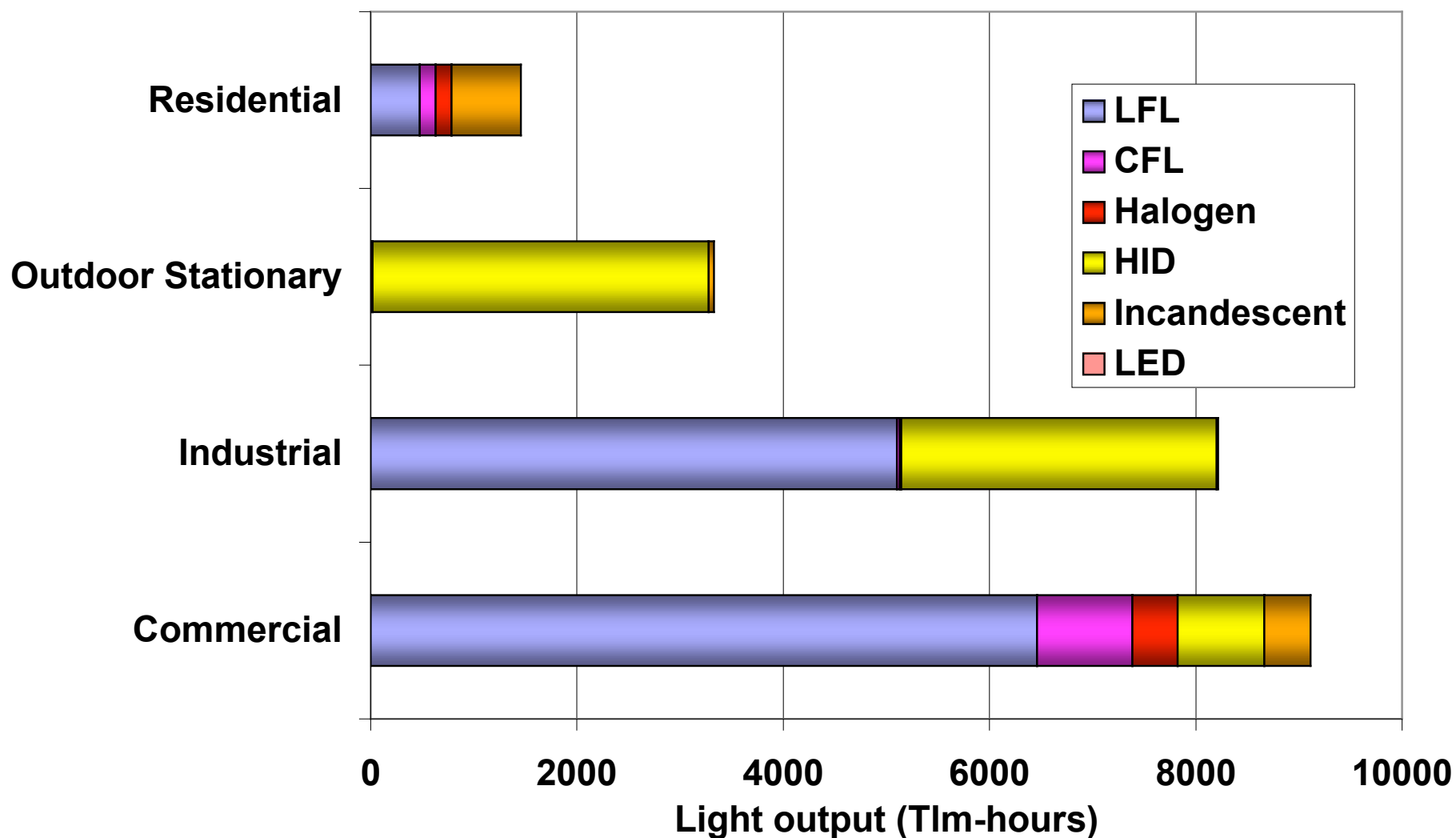


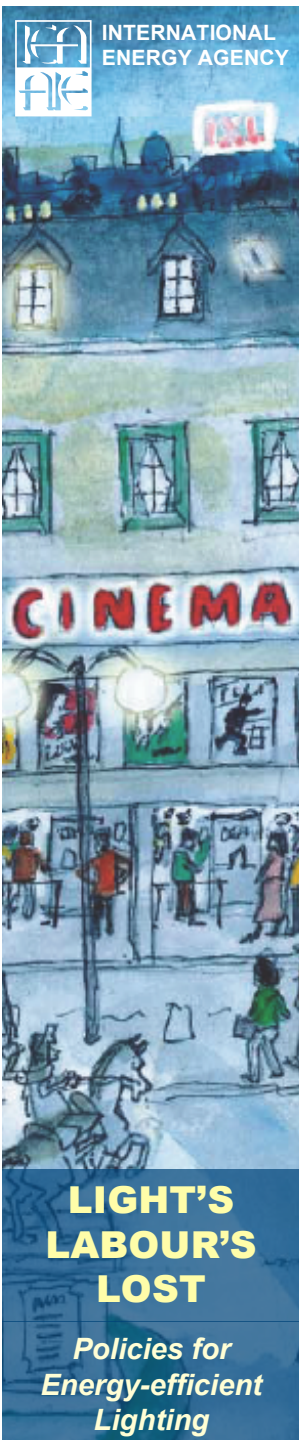
# What's at stake were incandescent lamps to be replaced by CFLs or equivalent globally?

- ~5% of world electricity demand would be avoided
- CO<sub>2</sub> emissions equivalent to 16% of the world's cars avoided
- But – non-trivial task. Requires comprehensive, carefully developed and soundly implemented policy portfolio plus international coordination



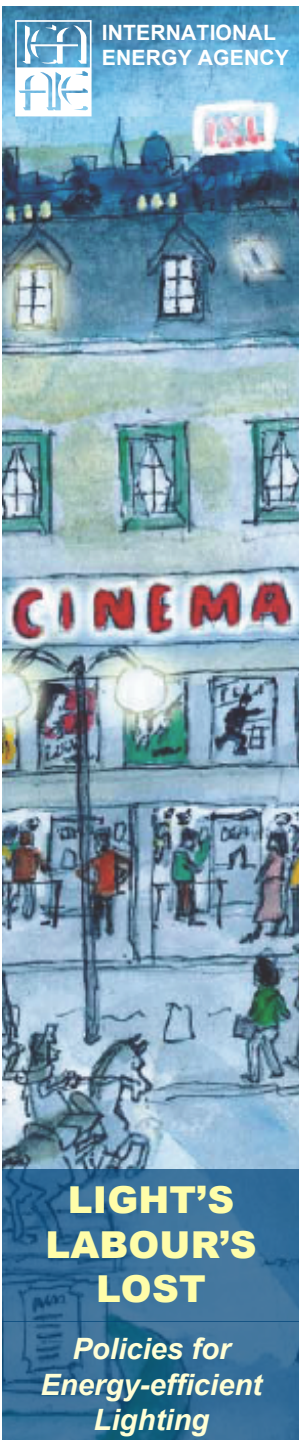
# Share of light by lamp technology in EU (2005)





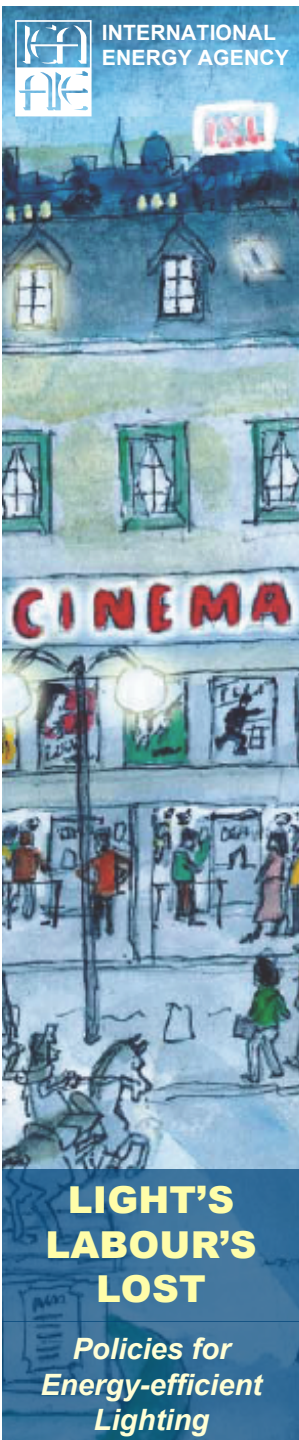
## G8-Gleneagle's Plan of Action “concrete recommendations”

- The IEA proposes policy measures to the G8 countries in areas where:
  - the IEA has done significant work
  - there is a strong case for coordinated policy
  - there are clear market barriers
  - there is significant energy saving potential
  - there are substantial policy gaps
- Secretariat prepared a paper on concrete recommendations for energy efficiency policy measures presented to the 2006 G8 St Petersburg summit



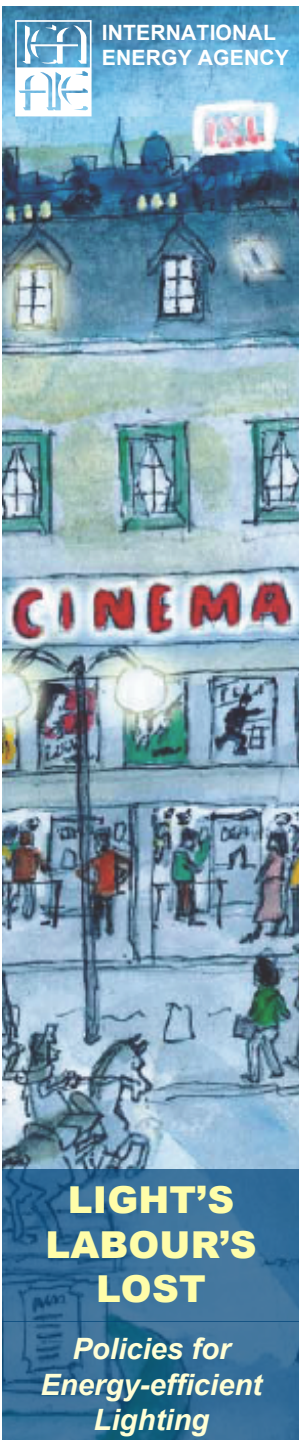
## 2006 G8 St Petersburg & after

- The IEA recommended that the G8 endorse the objective of across-the-board best practice in lighting
- Summit communiqué supported the IEA's concrete measures but requested they be developed in more detail
- Philips proposed a global phase-out of inefficient incandescent lamps in favour of energy-efficient alternatives over a 10 year period



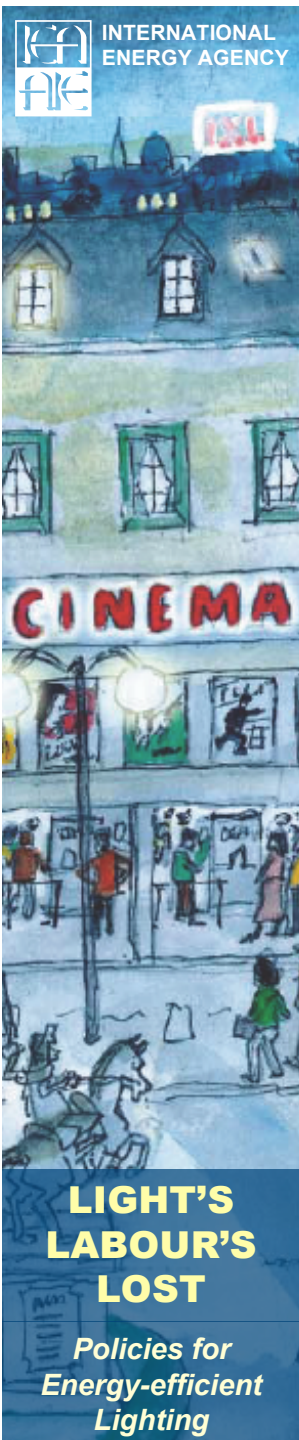
# IEA G8 Follow-up actions

- A series of workshops targeting more focus in policy recommendations
- First workshop held jointly with EU on Feb 26<sup>th</sup> 2007 in Paris on
  - *CFL quality and strategies to phase-out incandescent lighting ([www.iea.org](http://www.iea.org))*
  - Feb 20th Australia announced their policy of phasing-out incandescent lighting by 2011



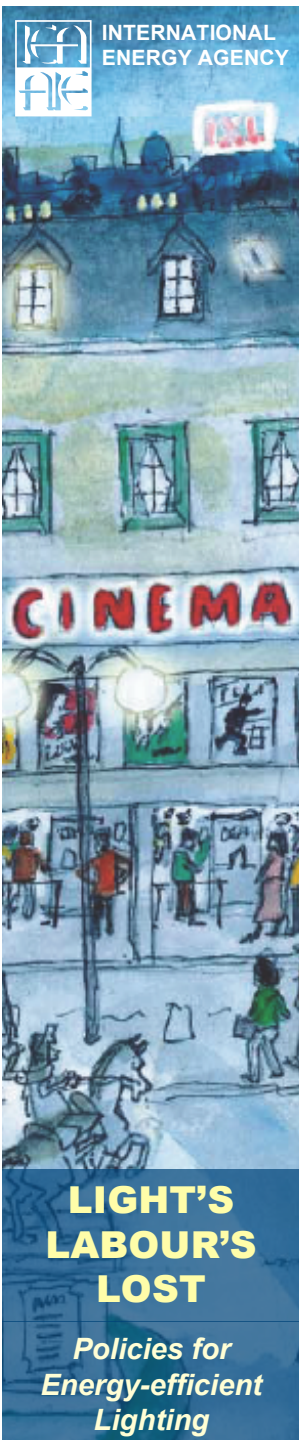
# What happened?

- All world's major lighting companies present (Philips, Osram, GE, Sylvania + CALI)
- Major OECD producers agreed common position supporting the objective of phasing-out inefficient incandescent lighting in a reasonable timeframe
- High efficiency alternatives available but quality control and production capacity needs attention
- Mix of regulatory and market building measures needed



# What's happened since in EU?

- **March 9<sup>th</sup>, EU Council of Ministers (meeting of heads of state) called on the European Commission to establish a regulation addressing incandescent lighting by 2009 under the 2005 Eco-design Directive**
- **March 12<sup>th</sup>, UK announces plan to complete the phase-out of inefficient GLS incandescent lamps by 2011, independently of eventual EU Directive provisions**
- **March 28<sup>th</sup>, cross-party group of Members of European Parliament urge governments and the EC to quickly introduce new energy efficiency standards for lighting and to introduce market surveillance measures to prevent such standards from being flouted by importers**



# What's happened since in EU?

- April - May, other EU states (Ireland, Belgium (flanders) and Portugal) announce that they will also introduce measures that effectively phase-out incandescent lighting
- This is via a mix of financial and fiscal incentives/disincentives and agreements with the lamp supply chain irrespective of EU Eco-design process
- Switzerland is also preparing regulations (June 2007)



# Initiatives from European Lamp Companies Federation

- On 1 March 2007, the European Lamp Companies Federation (ELC) announced a first-ever joint industry commitment to support a government shift to more efficient lighting products for the home
- On 20 April 2007 a Questions & Answer document was published by the ELC on the issue and the lamp industry commitment to support a government shift to more efficient lighting products for the home
- In May 2007 the European Commission will commence their study for an Implementation Measure on domestic lighting
- The ELC has committed itself to work with the EU institutions to develop ambitious minimum energy performance requirements for lighting in the home over the coming months

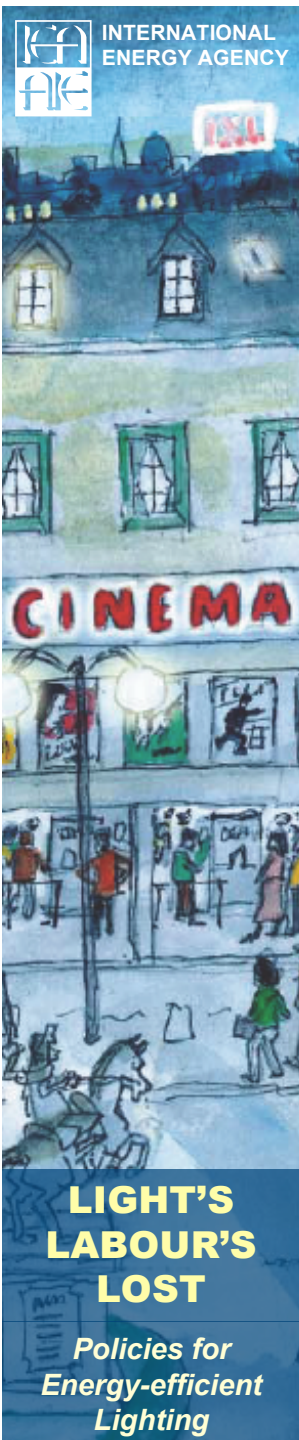
Source ELC



# The ELC proposal: June 5<sup>th</sup> 2007

- Energy performance requirements have been proposed for household GLS and halogen lamp-categories over a period of up to 10 years
- A phased approach starting in mid 2009 is advocated to ensure availability of energy saving alternatives in all applications and to safeguard interests of ELC employees, the supply chain and consumers
- For each lamp category and for each phase, minimum efficiency specifications have been proposed on the basis of the Energy Efficiency Classification used in the EU household lamps energy label

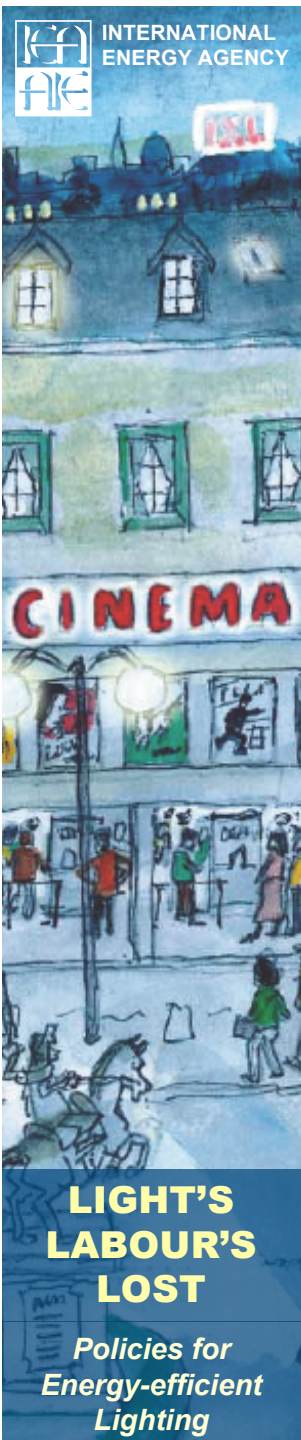
Source ELC



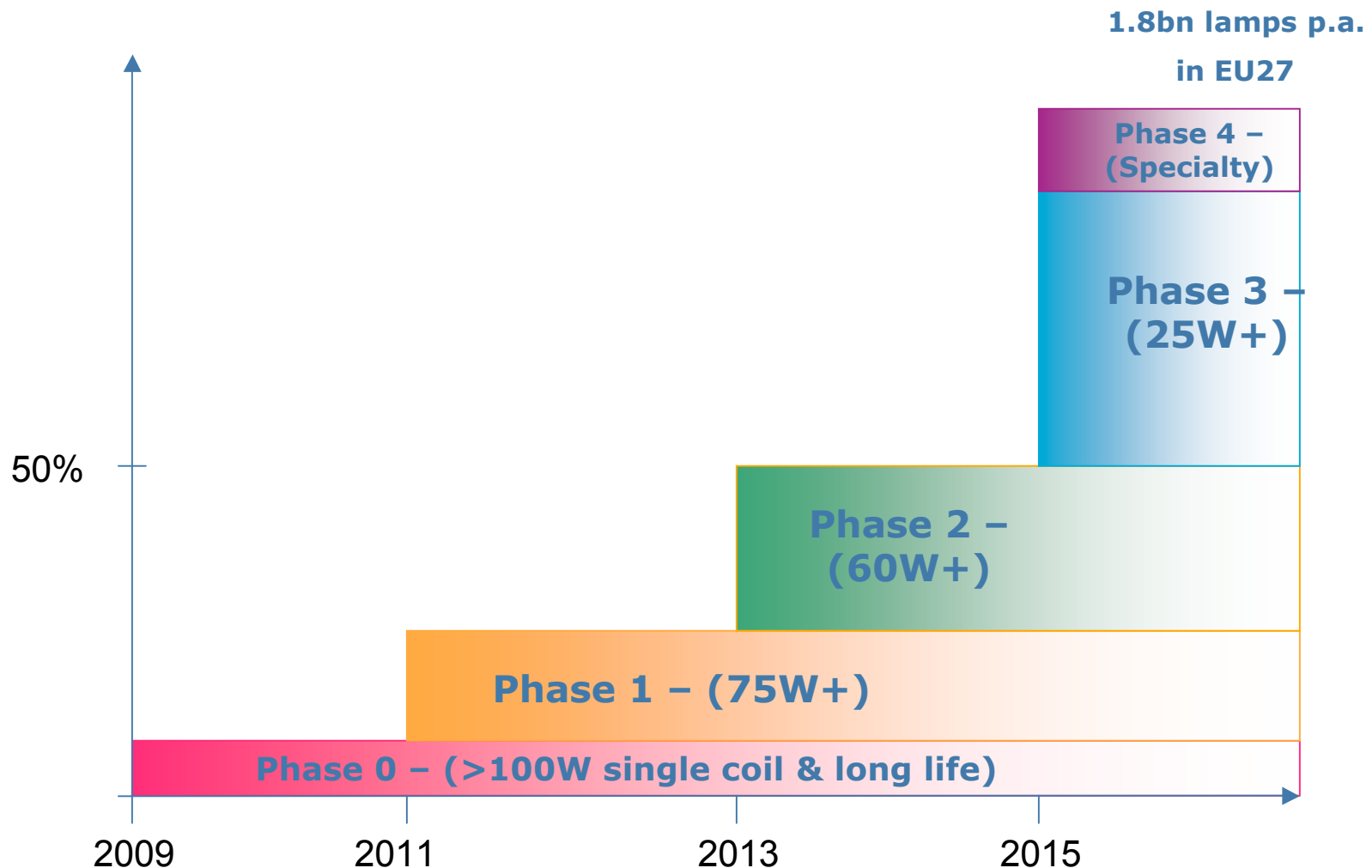
# The ELC proposal

- The minimum efficiency specifications become more stringent over time in two stages
- Measures first focus on lamps with Edison & Bayonet cap as defined under the labelling Directive 98/11/EC
- These lamps cover approximately 85% of the total EU27 incandescent lamps market (excluding incandescent reflector lamps and other specialties)

Source ELC



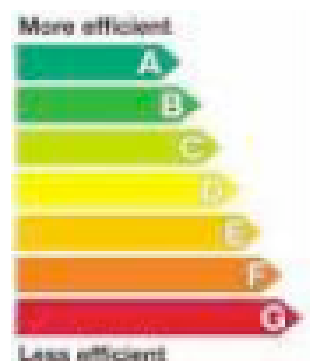
# The ELC proposal



Source ELC

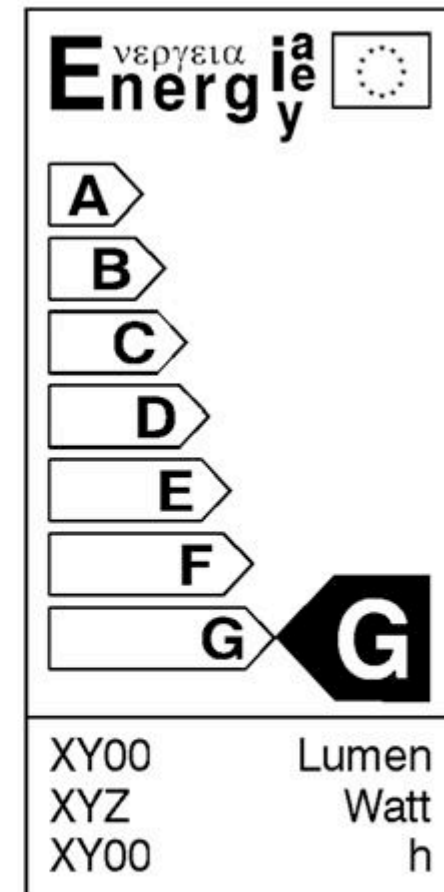
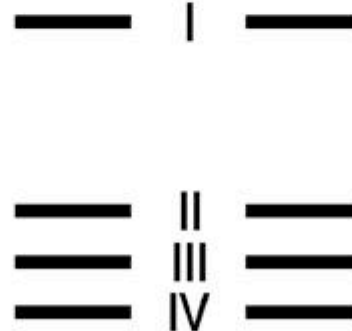
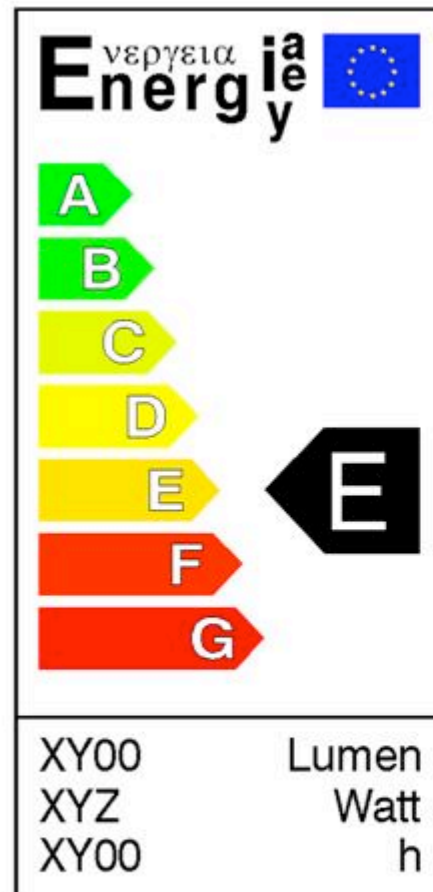
# Proposal in terms of energy label lamp class

Lamp Category	Phase 1 2009	Phase 2 2011	Phase 3 2013	Phase 4 2015	Phase 4+ 2017 <sup>iv</sup>
>100W	ABCD <del>EFG</del>	ABC <del>DEFG</del>			
75W+		ABCD <del>EFG</del>	ABC <del>DEFG</del>		
60W+			ABCD <del>EFG</del>	ABC <del>DEFG</del>	
25W+				ABCD <del>EFG</del>	ABC <del>DEFG</del>



*EU Energy Label (left)*

# EU household lamp label includes labelling of light output, power and lifetime



# ELC's performance proposal per phase (minimum efficacy limits)

Lamp Category	Phase 1 2009	Phase 2 2011	Phase 3 2013	Phase 4 2015	Phase 4+ 2017 <sup>vi</sup>
>100W	18 lm/W	20 lm/W			
100W		14 lm/W	17 lm/W		
75W		14 lm/W	16 lm/W		
60W			13 lm/W	15 lm/W	
40W				11 lm/W	14 lm/W
25W				10 lm/W	12 lm/W

Source ELC

Notes:

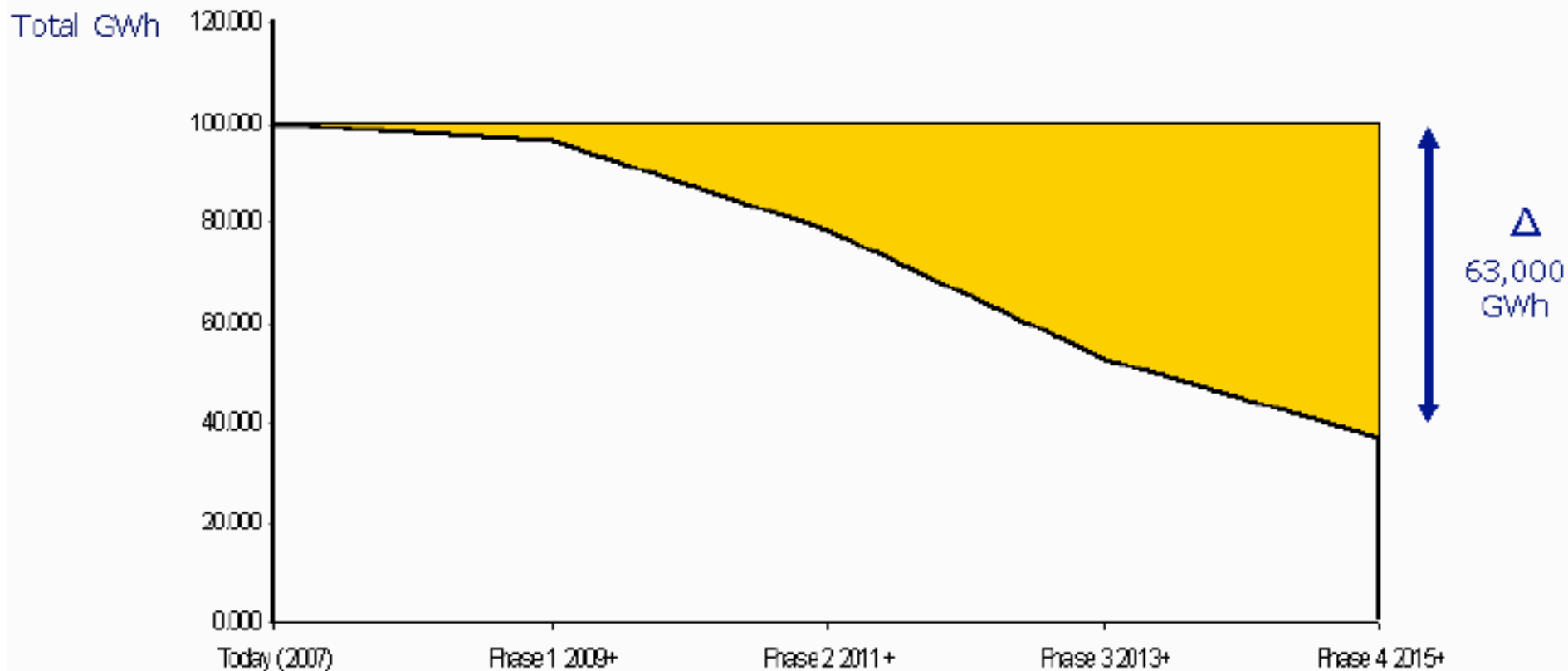
- Comparable incandescent lamps are roughly 20% less efficient at 230V than 120-110V
- Lamps must have a life of 1000hrs or more and meet IEC standards

**LIGHT'S  
LABOUR'S  
LOST**

*Policies for  
Energy-efficient  
Lighting*



# ELC's estimates of electricity savings in EU 27 from their proposal



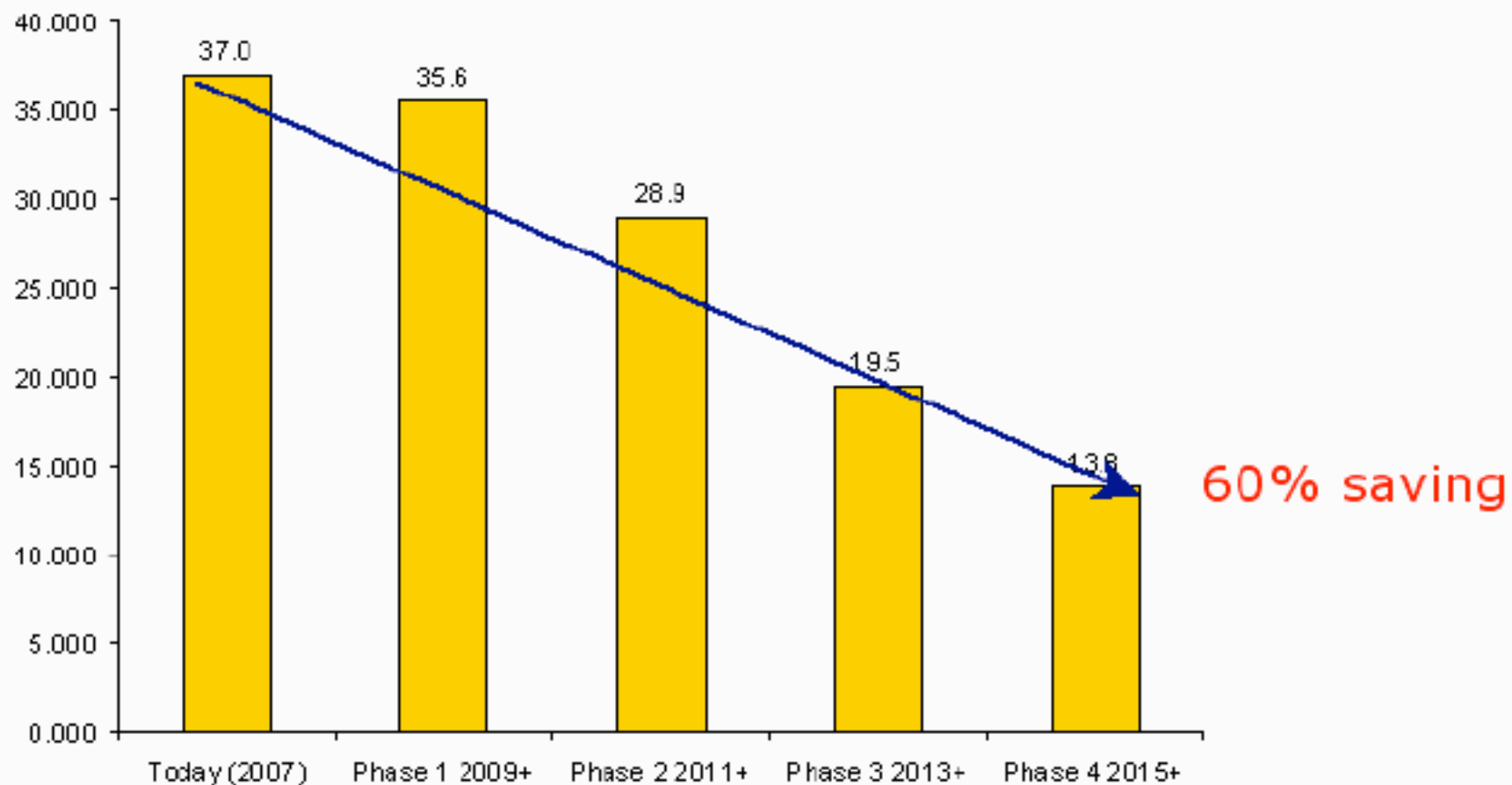
## LIGHT'S LABOUR'S LOST

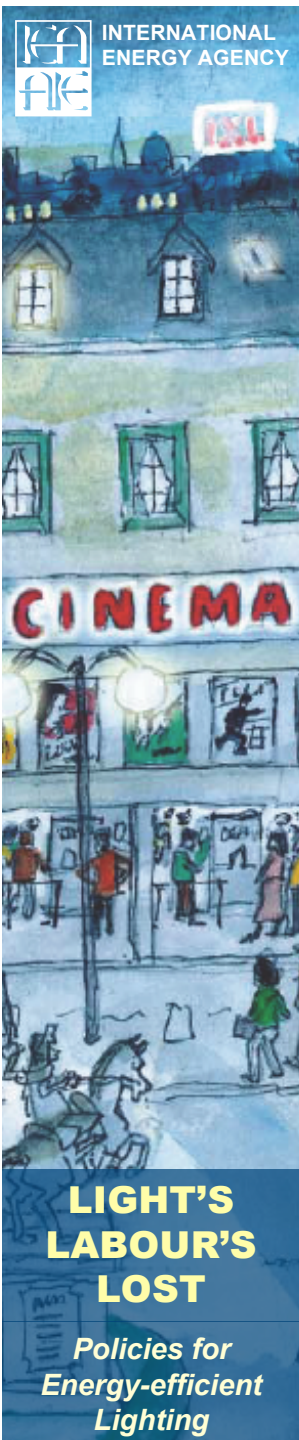
*Policies for  
Energy-efficient  
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Source ELC

# ELC estimated CO<sub>2</sub> savings in EU 27

Total CO<sub>2</sub> emission in Mega tons



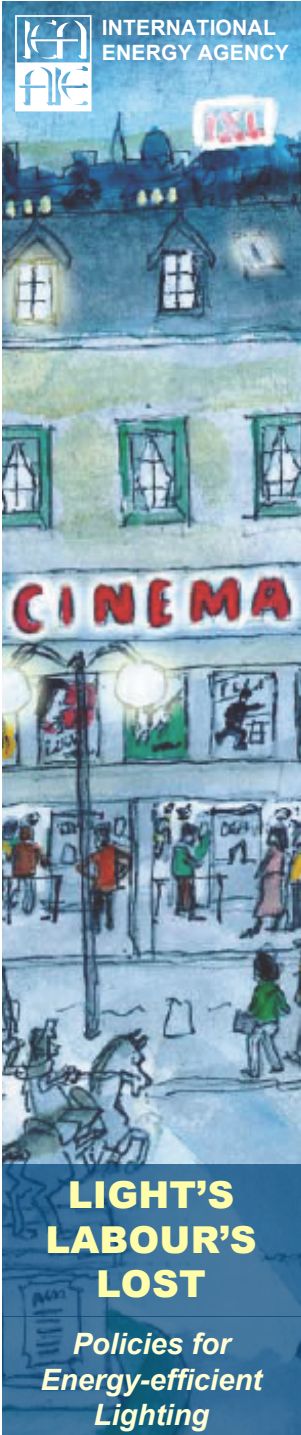


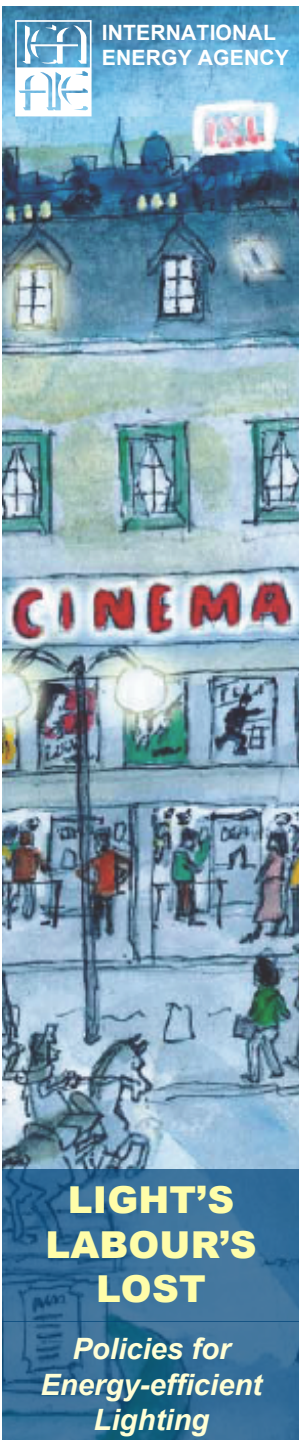
# Next steps – European Commission's Eco-design study is just starting

- Needs to consider:
  - the performance requirement by lamp wattage approach
  - Stringency of efficacy thresholds and the mix of probable replacement technologies
  - Potential exceptions and treatment of halogen lamps
  - Industrial policy
  - International lamp capacity issues

# Bravo but...

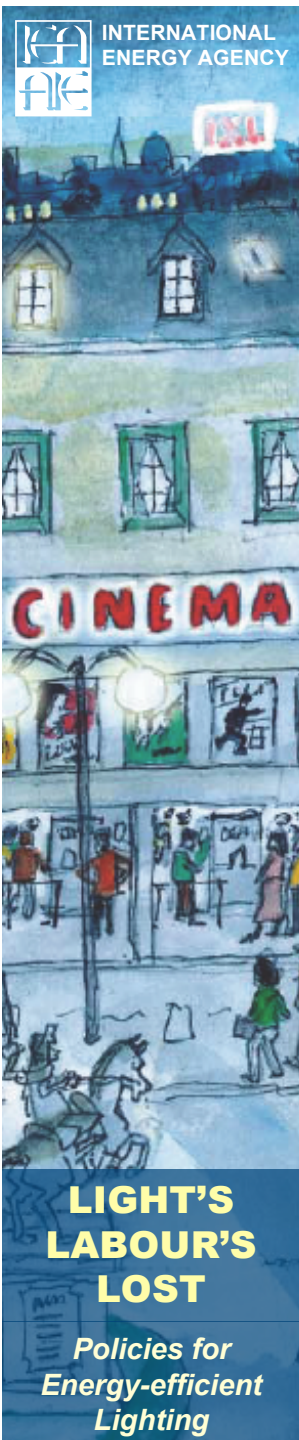
- CFL quality not currently policed except in UK and Denmark
- Colour temperature characteristics not usually indicated or understood
- Warm-up times still need attention
- Programmatic implementation capacity urgently needed e.g. testing and supervision and policy making/monitoring





# G8 Summit Heiligendamm, Germany June 2007 communiqué

- The G8 committed to “move forward with implementing the Gleneagle’s and St Petersburg Action Plans, thereby retaining and supporting the IEA’s close involvement” and to “move forward with implementing the (IEA’s) concrete recommendations on energy efficiency”
- “The IEA recommends viii) that governments phase out inefficient incandescent bulbs as soon as commercially and economically viable”



# And what's happening elsewhere?

- Thailand is preparing measures
- China is currently considering them
- India, Indonesia, Vietnam, Ghana, Egypt, South Africa and others are strengthening major CFL programmes
- Some Caribbean nations have already begun phase-out programmes (e.g. Cuba, Venezuela)
- UNDP/UNEP/GEF is launching a major global effort to support incandescent lamp phase-out in non-OECD countries